

remaining portion of the phrase inserted into claim 13, "providing an indication that said at least one exterior surface is of a temperature hot to human touch," is the identical statement of purpose as already given at the end of claim 1. It is included in claim 13 for clarity. Thus, the office action is equally applicable to claim 13 as it is to claim 1. The Examiner is aware of this fact since the rejection of the claims on substantive grounds in the office action refers to "a warning indicator," which language comes from claim 13 and not from claim 1. Thus, the response to the substantive grounds of rejection below refers to claim 13 instead of claim 1.

In reference to the objection to the drawings, no change to the drawing is necessary since the "at least one exterior surface" is already shown in the Figures as will be addressed below.

Attention is now turned to the obviousness rejection. The Examiner cites the worklight disclosed in applicant's specification in combination with Parker '340 and Virnoche. Parker '340 is cited as disclosing a thermochromic warning indicator both with and without a thermal moderator. A thermal moderator arises in applicant's pending claims 8, 9 and 12. Virnoche is cited as disclosing a recessed area for receiving a thermal warning indicator. A recessed area arises in applicant's pending claim 12.

As for the Examiner's citation of the basic worklight disclosed in the specification, the undersigned notes that all of applicant's claims define the invention as an improvement in a worklight of specified type (the so-called Jepsen claim format). In fact, worklights without applicant's improvement have been known and in widespread use for a long time. The claims are written in Jepsen format precisely to emphasize that applicant has brought a new and useful improvement to a worklight that has long been known and in widespread use.

The improvement arises through the use of a thermochromic warning indicator as set out in claim 1 to visually indicate to the user that the worklight surface is presently sufficiently hot that the user would not want to touch it. While this might seem to the examiner like a simple and obvious expedient, it is not—as the following discussion will make clear.

The hot worklight surface is a long-standing problem. Worklights, and in particular halogen worklights, have been around for a long time. They are in

widespread use and have been for a number of years. Worklights are used, for example, in the housing industry. Building contractors routinely use them in the course of building new houses and remodeling old ones to illuminate work areas under construction where regular lighting may not yet have been installed, or in remodeling areas where the regular lighting may be disconnected or insufficient, or in constrained work areas not normally illuminated, or when working at dusk or into the night. The volume of homes being built or remodeled each year provides a rough casual measure by which to gauge the number of worklights in use in this industry segment alone.

The lights are carried as stock items as well as special promotional items in the nation's largest and most respected mass merchandisers and retailers reaching out to the professional and do-it-yourself markets. These include The Home Depot, Lowes, Sears, and others. According to The Home Depot's Annual Report for the fiscal year ended February 3, 2002 filed with the SEC, the company is the world's largest home improvement retailer and the second largest retailer in the United States (based on net sales volume). At the end of the 2001 fiscal year, the company was operating 1,333 stores. According to Lowe's latest annual report (Annual Report of Lowe's companies, Inc. for fiscal year ended February 1, 2002), "Lowe's Companies, Inc. ... is the second largest retailer of home improvement products in the world, with a specific emphasis on retail do-it-yourself (DIY) and commercial business customers. ... As of February 1, 2002, Lowe's operated 744 stores in 42 states, with approximately 80.7 million square feet of retail selling space." According to the Sears annual report (Sears, Roebuck and Co. Annual Report for the fiscal year ended December 29, 2001) the company operates 867 full-line stores as well as other specialty hardware stores under the Sears Hardware and Orchard Supply Hardware names. [These annual reports are filed with the SEC and are available on-line, for example, through [www.companiesonline.com](http://www.companiesonline.com) as well as other sites.]

All of these companies stock worklights, and in particular several different models of 120-Volt halogen worklights, in each of the above numbers of stores. Already for the three chains mentioned above, Home Depot, Lowes and Sears, that amounts to halogen worklights being stocked in 2944 stores (in the US alone) and

that does not include the Sears specialty hardware stores and other chains (such as Menards or Costco) that also carry halogen worklights on a regular or occasional basis. Sears and Home Depot even sell them under their own private brands, Craftsman and Craftsman Professional for Sears and Commercial Electric for The Home Depot, as well as selling them under third-party brand names (Regent, Rite-Lite, IDC, The Designers Edge and others). The point here is that there are a massive number of halogen worklights sold and in widespread use each year.

Halogen worklights are of special interest here because these lights get the hottest and they are in great demand because they are very bright. This is so because of the principle by which the halogen lights work. They run at a high temperature to give off more light, and they are able to sustain their high-temperature operation because of halogen gas that resides in the light bulb and causes a reaction that regenerates the tungsten filament, giving it a longer life, for otherwise the tungsten filament would burn out quickly at the high operating temperatures. The result is: a lot greater illumination, a high demand for the lights because of the greater illumination, and a light housing that gets too hot to handle because of the excess heat that is necessarily generated to provide the greater illumination.

How hot do the lights get? The housing can approach 150 degrees Centigrade (302 degrees Fahrenheit).

The temperature at the exterior surface of a worklight is regulated by Underwriters Laboratories Inc. (UL). Underwriters Laboratories Inc. is an independent, not-for-profit product safety testing and certification organization of national reputation. All of the above-mentioned merchandisers (The Home Depot, Lowes, Sears, Menards, Costco) require their worklights to be UL-inspected and certified. Worklights fall under UL Standard 153, entitled "Standard for Portable Electric Luminaires." According to that standard the maximum permissible worklight surface temperature is 150°C. (This is stated in Table 125.1, item 2, New UL Standard 153, 12<sup>th</sup> edition). Standard 153 provides further that "any external enclosure surface temperatures exceeding 90°C (194°F) during the Normal Temperature Test shall be provided with a handle for positioning the light (114.3.1)." (For completeness note there is an exception in the rule: A worklight is not required

to comply with this handle requirement when it requires a tool for making aiming adjustments, that is, when the user does not have to bring his or her hand close to the worklight surface to make aiming adjustments.)

To guard against the possibility of injury to the user from a worklight surface approaching 302 Fahrenheit degrees, worklight manufacturers have conventionally and almost uniformly placed a printed warning label on the worklight surface. A sample warning label from an actual worklight reads: "WARNING - LAMP IS HOT!!!"

Another, more extensive sample warning label from an actual worklight reads:

"HOT SURFACE: Warning - Risk of Fire/Injury to persons, Keep away from combustibles, Unplug to change bulb, Do not touch bulb.  
Caution - Risk of electric shock, do not use with extension cord near water or where water may accumulate, Keep lamp at least 16 feet (5m) from pools and spas, Keep plugs and receptacles dry, For use only on GFCI protected circuits, Suitable for wet location use."

The labels are typically printed on gummed, heat-resistant labels that are adhered to the surface.

Both UL and the Consumer Product Safety Commission (CPSC) have issued recall notices against hazardously hot worklights. Submitted herewith as Exhibits A, B and C are press releases recalling worklights with an unacceptable risk of injury from heat and in some cases also electrical shock. Exhibit A is a press release from UL warning of an IDC Model 6110 portable halogen work lamp that "may present a serious fire or injury risk." The press release explains:

"Heat generated by the portable halogen work lamp may pose the risk of fire or injury if the lamp is tipped over in a face-down position and the 3-inch wire lens guard comes in contact with combustible materials.  
..."

Exhibit B is a press release from the CPSC announcing a recall of an Atlas Electric Corporation portable halogen worklight. The press release explains that, among other defects, "component temperatures may exceed set limits" and that "[a]s a result these work lights may pose a serious shock, burn or fire hazard."

Exhibit C is a press release from the CPSC announcing a recall of a Quality Craft portable halogen worklight. In addition to shock hazard, the CPSC warns that "...the internal wiring temperature may exceed limits that are safe, posing a fire hazard."

The above discussion shows that worklights (and in particular hot, halogen worklights) are sold in very great numbers (major merchandisers all carry them),

the hot-worklight-surface problem is serious, widespread and on-going (UL continues to test worklight surface temperatures as a requirement for UL certification and major merchandisers continue to require UL certification), and the industry response to the problem has been to put printed gummed labels on the surface with warnings such as "HOT SURFACE!!!."

Against this history applicant has brought something new to the hot-worklight-surface problem: the use of a warning on the surface that appears when the surface is hot and that disappears when the surface cools down. This warning is provided by means of thermochromics as set out in claim 1.

Already at this stage of discussion common sense dictates that applicant has brought something new and useful to the crowded worklight industry to address a problem that the industry had long since given up on, and having brought something new and useful and eminently applicable to a long-standing fact of life in the worklight industry (the hot-surface problem), applicant ought to be deserving of protection under the patent laws. How does this common-sense impression square with the law of obviousness under Section 103?

The examiner does not contest that applicant has brought something new and useful to the worklight industry. The only issue is whether applicant's contribution is obvious in view of *Parker* (claims 1-5, 8-9 and 11) or in view of *Parker* and *Virnoche* (claim 12).

The rejection is based on the premise that given the *Parker* reference it would be within the ordinary skill in the art to add a thermochromic warning indicator such as disclosed in *Parker* to a worklight surface that gets hot and that the *Parker* reference teaches how to do that. There are two things wrong with this argument. First, although worklights are known and thermochromic substances are known, there in fact is no suggestion in the art, in the *Parker* reference or in any of the other references of record to combine them. The Examiner does not point to any particular teaching in the *Parker* reference that suggests making the combination, and in fact there is no such teaching. The suggestion to combine comes only from applicant's specification. Second, the *Parker* reference does not teach how to do it. *Parker* does not provide the level of specificity needed so that the routine practitioner in the art would know how to incorporate a commercially suitable thermochromic warning

indicator in the environment of an almost 300 degree Fahrenheit worklight. At best, *Parker* teaches that once one decides it might be useful to have a thermochromic warning label on a worklight (a decision for which there is already no suggestion in the prior art), various formulations and methods are known for producing thermochromic substances that will change temperature at a various activation temperatures. (Even *Parker's* teachings on the thermal moderator are inadequate, as discussed below.) But if one were to follow the teachings of the art, one would find that there are a number of tradeoffs or problems in the selection of any particular thermochromic substance and in the arrangement by which thermal communication is established between the thermochromic substance and the underlying external worklight surface. For one factor, the color change may not necessarily occur uniformly over an extended thermochromic area. Sometimes, for example, the thermochromic substance can take on a blotchy or mottled appearance as the worklight surface approaches its operating temperature. This may result from such causes as uneven heating of the underlying surface, uneven heat transfer to the thermochromic substance, excessive temperature, or possibly even the formulation of the thermochromic substance itself. While such uneven color change may nevertheless provide an effective warning, it may also present an undesirable commercial impression of lesser product quality and so is generally undesirable. Another factor is the stability of the thermochromic substance above its activation temperature. For some thermochromic formulations the desired color change occurs only within a limited range above the activation temperature. If the temperature continues to rise to a level sufficiently far above the activation temperature, then the color may fade or otherwise become less conspicuous, and in some instances with repeated exposure to excessive temperatures the ability to undergo a color change may be lost altogether. Yet other factors are the selection of colors available and the cost of the thermochromic substances, as some formulations are more costly than others. These factors are expressly called out in applicant's specification and are to be considered as part of the invention as a whole when analyzing obviousness under Section 103.

So what does one of ordinary skill face when trying to provide a warning label on the worklight formed of a thermochromic substance? All of the problems indicated

above. Perhaps at this stage the person of routine skill would be dissuaded from continuing the search for the right thermochromic substance or for the right method or combination for applying it, either because the appearance was just too far from acceptable for a commercially successful worklight or because the cost for developing a special formulation to be used on worklights would be perceived to be prohibitively high. Perhaps the person of ordinary skill would persevere in the search, believing on faith that a proper formulation could be found and that the cost would not be prohibitively high. In either case the discovery of a suitable thermochromic substance or arrangement for applying it would go beyond routine skill. At best the suggestion from the prior art is that it would be obvious to try to find a suitable thermochromic substance or arrangement for applying it; that is, it would be "obvious" to the person of ordinary skill to try to search further for a solution. It is well established that "obvious to try" is not the standard for judging patentability under §103.

Thus, the rejection raises two primary legal issues: the lack of any suggestion in the prior art to combine the references, and the "obvious to try" standard is not the standard for obviousness under Section 103.

Let us look first at the *Parker* reference. *Parker* does not indicate any specific thermochromic material that would be of use for the temperatures of interest for the hot-worklight-surface problem. *Parker* is directed to the thermal moderator and only makes general references to liquid crystal compositions that serve as temperature indicators. In particular, *Parker* makes general references to two companies that make temperature responsive liquid crystals and general references to 10 patents (1:32-40), one textbook and two technical articles (2:40-43). This falls short of the specificity needed to be of use to the problem addressed by applicant's invention and amounts to no more than the teaching that there are a lot of thermochromics out there (in *Parker's* case, liquid crystal thermochromics) from which to try to find one that will work for the intended purpose.

*Parker* actually teaches that there are no liquid crystal thermochromics that would be useful directly for applicant's problem because their destruct range usually has an upper limit of about 80 to 90 degrees Celsius (2:56-58) and the temperatures of interest to applicant have to go up to around 150 degrees Celsius

(the UL maximum permitted temperature). Thus, *Parker* teaches that for applicant's problem one must use a thermal moderator (assuming here only for the sake of argument that there is some suggestion to persons of ordinary skill in applicant's art to look to thermochromics to begin with). But the thermal moderator taught by *Parker* is on the order of 2 inches thick. (4:42-54.) The prospect of having to put a 2-inch thick thermal moderator onto the worklight surface is more likely to dissuade than to encourage the person of ordinary skill in the worklight field and is effectively a teaching away from the use of a thermal moderator in connection with worklights.

Moreover, *Parker* teaches that lateral heat transfer can take place into the thermal moderator material, and for thicknesses above 2 inches this can affect the temperature determination at the interface with the surface. (4:42-54) In applicant's embodiments the thermal moderator is appreciably thinner so that the lateral heat transfer problem will be less. But this does not mean that one skilled in applicant's field would be justified in ignoring this teaching of *Parker*. At the least, *Parker* teaches that lateral heat transfer occurs. In applicant's environment lateral heat transfer could cause unsightly discolorations or irregularities at the edges that could impair the readability of a thermal warning message with letters that extend close to the edges or could be sloppy enough in appearance to be commercially unacceptable. The effective teaching of *Parker* with respect to lateral heat transfer is that further investigation will be required before it could be determined whether the thermal moderator method would be suitable for applicant's intended purpose.

*Parker* teaches a large number of materials for the thermal moderator, suggesting "ground or particulate cork sheets, foam asbestos, felt, corrugated cardboard, diatomaceous earth, fiber insulating board or the like." (3:61-67) This lacks any specific guidance for applicant's problem and is effectively little more than a suggestion that there are a wide variety of materials to try.

*Parker* is intended for "relatively high temperature objects such as pipes carrying steam or other hot fluids, boilers, vessels, furnace walls and the like." (4:55-60) These are temperatures way beyond the 150 degree Celsius UL temperature limit of interest in applicant's environment. (Note that although steam may be formed at 100 degrees Celsius, steam carried through pipes such as for



steam heating systems, steam engines or steam-powered electrical generators and the like is generally much hotter than the 100 degree boiling temperature of water.)

At this stage a few specific observations are made on the *Kronberg* and *Berry* references, which were cited but not applied. The other cited references were reviewed but are not seen to correct the deficiencies of the references applied.

*Kronberg* points out two additional practical problems of using thermochromics: oxidation of the thermochromic material at high temperatures, and leaching of the thermochromic material from its supporting matrix. *Kronberg* teaches that the thermochromic material should be surrounded with a glass matrix or ceramic composition. (4:4-11) The *Kronberg* claims specifically teach using a vitreous enamel for this purpose. In general *Kronberg* teaches that the thermochromic material must be "suitably protected." For example, *Kronberg* states: "When suitably protected cadmium sulfide or another thermochromic semiconductor is placed in an area or in contact with an object to indicate temperature,..." 4:25-27. Like *Parker*, *Kronberg* imparts the message that one must be careful about the specific thermochromic material or insulator material to be used. There are a lot of factors and a lot of variation in results possible.

The *Berry* reference uses thermochromics in an amusement or entertainment device that is intended to be held against the user's skin. This is a different temperature range from that of interest to applicant. Like *Parker*, *Berry* teaches that the substrate can be a large number of materials (3:5-17), effectively inviting the reader to try a long list of materials until one is found that works. The *Berry* substrate is not used as a thermal moderator and makes no suggestion of thermal moderation. The *Berry* substrate is used merely to support the thermochromic material and as a heat transfer means to carry heat from the user's body to the thermochromic material. There is no suggestion of moderating the heat to lower the temperature applied to the thermochromic material, and there is certainly no suggestion that this would be of use in the environment of hot worklights.

The *Virnoche* reference cited for its disclosure of a recessed region has no connection with worklights or thermochromics. It merely shows a thermometer in a recess on a clothes iron. It does not relate to a thermal moderator and all the more so does not raise or address such problems as the lateral heat transfer problem when a

thermal moderator is disposed in a recess. It appears to have been selected for inclusion in the office action by using applicant's specification as a guide to pick and choose references having selected elements from applicant's claims.

Now let us take a look at the guidance provided by the Court of Appeals for the Federal Circuit, the rulings of which are binding on the PTO, in regard to the issues of suggestion to combine references and "obvious to try" rejections.

It is well established that the obviousness analysis is highly fact specific, is not given to *per se* rules, and is guided by the four factual inquiries of *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). This is set out, for example, in *Litton Sys., Inc. v. Honeywell, Inc.*, (Fed. Cir. 1996):

"To determine whether an invention would have been obvious in light of the prior art requires one to compare the claimed "subject matter as a whole" with the prior art "to which [the] subject matter pertains." *In re Ochiai*, 71 F.3d 1565, 1569, 37 USPQ2d 1127, 1131 (Fed. Cir. 1995). This comparison, however, only provides part of the relevant evidence. One must also examine the relevant historical facts and circumstances related to the claimed invention, such as commercial success, which tend to make it more probable than not that the subject matter of the invention would have been obvious. *Demaco Corp. v. F. Von Langsdorff Licensing, Ltd.*, 851 F.2d 1387, 1391, 7 USPQ2d 1222, 1226-27 (Fed. Cir.), *cert. denied*, 488 U.S. 956 (1988). As we expressly recognized in *Ochiai*, the obviousness inquiry is highly fact-specific and not susceptible to *per se* rules. 71 F.3d at 1569."

"The Supreme Court has underscored the fact intensive nature of the test for obviousness. *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809 (1986). In *Panduit*, the petitioner alleged that this court overrode the trial court's factual determinations with its own factual views. The Supreme Court echoed the petitioner's concerns:"

"While the ultimate question of patent validity is one of law . . . the § 103 condition [that is, nonobviousness] . . . lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

"*Id.* at 811 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966))."

According to *Graham*, *Litton* and numerous other cases, the obviousness inquiry here must take into account such historical background information as the

long-standing nature and severity of the hot-worklight-surface problem, the worklight industry's historical response to the problem (put on a printed, gummed warning label), the complete absence of any use of thermochromics in worklights (the Examiner has found no references relating thermochromics to worklights in any way, and the undersigned is aware of none), and the historical fact that the *Parker '340* reference, which the Examiner applies as suggesting the use of thermochromics on worklights, has co-existed with the hot-worklight-surface apparently without ever having actually taught or suggested anything to anyone in the worklight industry about the hot-worklight-surface problem.

On the requirement for an explicit showing of the suggestion to combine references, a detailed explanation is quoted from *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 2000).

"As this court has stated, 'virtually all [inventions] are combinations of old elements.' *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); see also *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8, 12 (Fed. Cir. 1983) ('Most, if not all, inventions are combinations and mostly of old elements.'). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be 'an illogical and inappropriate process by which to determine patentability.' *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996).

"To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

"This court has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. In this case, the Board relied upon none of these. Rather, just as it relied on the high level of skill in the art to overcome the differences between the claimed invention and the selected elements in the references, it relied upon the high level of skill in the art to provide the necessary motivation. The Board did

not, however, explain what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination. Instead, the Board merely invoked the high level of skill in the field of art. If such a rote invocation could suffice to supply a motivation to combine, the more sophisticated scientific fields would rarely, if ever, experience a patentable technical advance. Instead, in complex scientific fields, the Board could routinely identify the prior art elements in an application, invoke the lofty level of skill, and rest its case for rejection. *To counter this potential weakness in the obviousness construct, the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness. [Emphasis added]*

"Because the Board did not explain the specific understanding or principle within the knowledge of a skilled artisan that would motivate one with no knowledge of Rouffet's invention to make the combination, this court infers that the examiner selected these references with the assistance of hindsight. This court forbids the use of hindsight in the selection of references that comprise the case of obviousness. See *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). Lacking a motivation to combine references, the Board did not show a proper prima facie case of obviousness. This court reverses the rejection over the combination of King, Rosen, and Ruddy."

*Rouffet* involved a complex invention in a field with a high level of skill. Lest the Examiner be tempted to think that a specific teaching is needed only when a high level of skill in the art is involved, a particularly instructive discussion of the same need for specific identification is quoted in an art with a particularly low level of skill.

In *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999), the court described the invention as

"a large trash bag made of orange plastic and decorated with lines and facial features, allowing the bag, when filled with trash or leaves, to resemble a Halloween-style pumpkin, or jack-o'-lantern. As the inventors [names omitted] note, the invention solves the long-standing problem of unsightly trash bags placed on the curbs of America, and, by fortuitous happenstance, allows users to express their whimsical or festive nature while properly storing garbage, leaves, or other household debris awaiting collection." *Dembiczak*, at 1615.

The claims included such simple and non-technical elements as "a flexible waterproof plastic trash or leaf bag," the bag having "an outer surface which is premanufactured orange in color for the user to simulate the general appearance of the outer skin of a pumpkin....," and "facial indicia including at least two of an eye, a nose and a mouth on the orange color outer surface for forming a face pattern...." Here is how the court described the obviousness analysis:

"Our analysis begins in the test of section 103 quoted above, with the phrase 'at the time the invention was made.' For it is this phrase that guards against entry into the 'tempting but forbidden zone of hindsight,' [citations omitted], when analyzing the patentability of claims pursuant to that section. Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. [Citations omitted] Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.'"

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."

The court goes on to give a long list of citations with quoted excerpts standing for the proposition that specific objective evidence must be identified for the teaching, suggestion or motivation to combine references. The court then concludes:

For example, in this case the Board found that the Holiday bag reference depicts a 'premanufactured orange' bag material, finds that Shapiro teaches the use of paper bags in various sizes, including 'large,' and concludes that the substitution of orange plastic for the crepe paper of Holiday and the paper bags of Shapiro would be an obvious design choice. Yet this reference-by-reference, limitation-by-limitation analysis fails to demonstrate how the Holiday and Shapiro references teach or suggest their combination with the conventional trash or lawn bags to yield the claimed invention. See *Rouffet*, 149 F.3d at 1357, 47 USPQ2d at 1459 (noting Board's failure to explain, when analyzing the prior art, "what specific understanding or technical principle . . . would have suggested the combination"). Because we do not discern any finding by the Board that there was a suggestion, teaching, or motivation to combine the prior art references cited against the pending claims, the Board's conclusion of obviousness, as a matter of law, cannot stand. (Citations omitted)"

The lesson from these and other cases is that the showing of a motivation to combine must be clear and particular, and it must be supported by actual evidence. Generalized and airy statements extracted from a reference do not meet the clear and particular standard. In the present case the Examiner has not indicated any clear and particular motivation in the *Parker* and *Virnoche* references. The historical background of applicant's invention described above strongly indicates that those skilled in applicant's art at the time the invention was made would find no motivation

in *Parker*, *Virnoche*, or any other references to apply thermochromics as applicant has done to the hot-worklight-surface problem.

Even if there were some suggestion relating thermochromics to the hot-worklight-surface problem (and all available evidence shows there is not), at best the references of record relating to thermochromics would fairly be viewed only as suggesting that it would be obvious to try to apply a thermochromic solution to the problem. It is well established that "obvious to try" is not the standard of obviousness under Section 103.

An early and often-cited case discussing the "obvious to try" standard is *In re Tomlinson, Hall and Geigle*, 150 USPQ 623 (CCPA 1966). The invention in that case was a form of stabilized polypropylene. The PTO asserted the invention was obvious in view of the well known stabilized polyethylene art and the close relation of polypropylene to polyethylene. In finding the invention non-obvious, the court explained:

"As we see it, appellant's invention is the *discovery of what stabilizers for other materials, known in the art, will, and which will not, stabilize polypropylene against degradation by light.* ...[The examiner had stated] 'it would be obvious for a skilled chemist to try to stabilize polypropylene with a known stabilizer for polyethylene,' and that it would be 'routine experimentation for a skilled chemist to attempt to stabilize polypropylene against the deteriorative effect of light by first trying the known stabilizers for polyethylene such as ...'" Our reply to this view is simply that it begs the question, which is obviousness under section 103 of *compositions and methods*, not of the direction to be taken in making *efforts or attempts*. Slight reflection suggests, we think, that there is usually an element of 'obviousness to try' in any research endeavor, that it is not undertaken with complete blindness but rather with some semblance of a chance of success, and that patentability determinations base on that as the test would not only be contrary to statute but result in a marked deterioration of the entire patent system as in incentive to invest in those efforts and attempts which go by the name of 'research.'"

Later, in *In re O'Farrell*, 7 USPQ2d 1673 (Fed. Cir. 1988), the court further elucidated the impropriety of the "obvious to try" standard of obviousness:

"The admonition that 'obvious to try' is not the standard under sec. 103 has been directed mainly at two kinds of error. In some cases, what would have been 'obvious to try' would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters

were critical or no direction as to which of many possible choices is likely to be successful. [Citations omitted] In others, what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it. [Citations omitted]"

In the present case it is the second kind of error that is committed by rejecting applicant's claims on the *Parker* reference or on any other generalized thermochromic reference that does not somehow address the hot-worklight-surface problem with specificity. Applicant's venture into thermochromics explored a new technology to the worklight industry—a general approach that seemed to applicant, but to no one else in the worklight industry, to be a promising field of experimentation, where the prior art gave at best only general guidance as to applicant's invention or how to achieve it.

In summary, nothing in the prior art suggests the desirability of or incentive for using thermochromics in worklights, and the cited prior art lacks the specificity required to teach applicant's invention to the routine practitioner in the art.

The Examiner's objection to the drawing is now addressed. The reference to an exterior surface is made to distinguish an interior surface. Claim 1, and substitute claim 13 that replaces it, both call in the preamble for a "housing presenting at least one exterior surface." This provides an antecedent basis for the later reference to "said at least one exterior surface" appearing in the distinguishing portion of the claim. The reference to the exterior surface is there because the thermochromic substance introduced in the distinguishing portion of the claim is "in thermal communication with at least a portion of said at least one exterior surface."

The reason that the claim calls for the thermochromic substance to be in thermal communication with a portion of the exterior surface of the housing is that the user is most likely to touch the exterior surface of the housing and the point of the invention is to communicate to the user when the exterior surface is presently hot. In principle, it would be possible to communicate when other surfaces are hot, for example, the interior portion of the housing formed by the interior sidewall 17, bottom wall 18, back wall 19 and the opposing side and top walls (see FIG. 1). But the invention addresses instead the hotness at the exterior surface of the housing.

Plainly FIG. 1 shows the housing 10, which has a body portion 11 and a front bezel 12 with evident external surfaces. FIG. 1 shows the thermal warning indicator 23 in thermal communication with the front face of the bezel 12, which is an exterior surface of the housing as called for in the claim (as opposed to an interior surface of the housing at the interior portion that holds the light bulbs 21). No correction to the drawing seems warranted.

In closing, the undersigned directs the Examiner's attention to the Supreme Court's admonition given many years ago in *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 US 428 (1911), that seems most appropriate here:

"Its [the invention's] simplicity should not blind us as to its character.

Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and in the light of the accomplished result it is often a matter of wonder how they so long eluded the search of the discoverer and set at defiance the speculations of inventive genius [citations omitted].

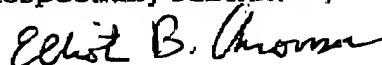
Knowledge after the event is always easy and problems once solved present no difficulties, indeed, may be represented as never having had any.

And expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by merely skillful attention.

But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not."

The undersigned asserts that the application is now in condition for allowance and action to that effect is respectfully requested. If the examiner feels that there are any lingering issues that can be resolved by telephone or feels that a telephone interview would be beneficial in any way, she is invited to call the undersigned at 510-658-9511.

Respectfully submitted,



Elliot B. Aronson

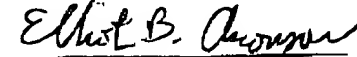
Reg. No. 29,279

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Oakland, CA 94618  
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Fax: 510-658-9220

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

11/19/2002

Date

By 

Elliot B. Aronson

Reg. No. 29,279



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## UL Warns Consumers and Retailers About Potentially Hazardous Halogen Work Lamps Made in China

**NORTHBROOK, Ill., Nov. 6, 1998** -- The safety experts at Underwriters Laboratories Inc. (UL) are notifying consumers and retailers that the IDC Model 6110 portable halogen work lamp manufactured in China by International Development Corporation may present a serious fire or injury risk. Available in various retail outlets in the United States, this product does not comply with UL's safety requirements for such devices and carries an unauthorized holographic UL Mark.

Heat generated by the portable halogen work lamp may pose the risk of fire or injury if the lamp is tipped over in a face-down position and the 3-inch wire lens guard comes in contact with combustible materials. Models of the work lamp equipped with 4-inch wire lens guards comply with UL's safety requirements and are not involved in this notice. To determine the size of the wire lens guard, consumers should place a ruler perpendicular to the lens and measure the distance from the lens to the wire guard.

The potentially hazardous work lamp can be identified by the following markings: "E167574 Listed Work Light 4D60," "Made in China," and "Model 6110" on the product.

Although UL is unaware of any reported incidents of fire or injury, consumers are urged to stop using this product immediately and return it to the place of purchase.

To verify the validity of the UL Mark on products manufactured in China, consumers in the United States can either call UL's toll free number at: +1-888-UL4-MARK (+1-888-854-6275), Monday through Friday, between the hours of 8:00 a.m. and 4:30 p.m., Eastern time (EDT), or send an e-mail providing a description of the product to: **listinfo@ul.com**.

Underwriters Laboratories Inc. (UL) is an independent, not-for-profit product safety testing and certification organization that has tested products for public safety for more than a century. Each year, more than 14 billion UL Marks are applied to products worldwide. For a copy of this press release or to obtain further safety information, visit UL's Web site at **www.ul.com**.

Ser. No. 09/891,484  
Response to Office Action  
Exhibit A

Portable Halogen Work Light Recalled by Atlas Electric Corp

Page 1 of 2

**MESSAGEorg.com**Ser. No. 09/891,484  
Response to Office Action  
Exhibit B**WATKINS**  
TRADE MARK  
Network Marketing for 133 Years**Work-from-Home Online or Offline  
Residual Income**Open only to  
residents of  
the U.S. and  
Canada**Search SPYorg.com**Match: Format: (Not sure of spelling? Use first letters  
and \* such as abc\* or abcd\* or abcde\*)Search Words: 

## NEWS from CPSC

### U.S. Consumer Product Safety Commission

Office of Information and Public Affairs

Washington, DC 20207

FOR IMMEDIATE RELEASE

January 2, 1996

Release # 96-059

CONTACT: Kate Primo

(301) 504-0580 Ext. 1187

## CPSC And Atlas Electric Corporation Announce Portable Halogen Work Light Recall

WASHINGTON, D.C. - In cooperation with the U.S. Consumer Product Safety Commission (CPSC), Atlas Electric Corporation of Burlington, N.C., is voluntarily recalling approximately 15,600 portable halogen indoor/outdoor work lights, models CLP150, PQ150WS, PQ500WS, ST500 and TST500.

Water may leak into the lights, component temperatures may exceed set limits, or the junction box may break away from the main bulb housing to expose live wires. Models ST500 and TST 500 may also tip over easily. As a result these work lights may pose a serious shock, burn or fire hazard.

The models subject to this recall were sold in white boxes and were printed in part with the Atlas address, Atlas logo, and model number, and "Made in China." Model ST500, sold since February 1995, is a single work light mounted on a tripod. Model TST500, sold since June 1995, consists of two work lights mounted on a tripod. Model CLP150, sold since July 1995, is a clip-on work light. Models PQ150WS and PQ500WS, sold since February 1995, consists of a light mounted on a small frame with a handle on top. All of the lights involved in this recall are black and yellow. Electrical distributors and retailers sold these work lights nationwide for approximately \$11.95 to \$35.95 for the light mounted on a tripod.

Atlas Electric Corporation has received no reports of injury associated with the use of these products.

Portable Halogen Work Light Recalled by Quality Craft

Page 1 of 1

# NEWS from CPSC

## U.S. Consumer Product Safety Commission

Office of Information and Public Affairs

Washington, DC 20207

FOR IMMEDIATE RELEASE

May 30, 1996

Release # 96-135

CONTACT: Kate Premo

(301) 504-0580 Ext. 1187

### CPSC and Quality Craft Announce Portable Halogen Work Light Recall

WASHINGTON, D.C. - In cooperation with the U.S. Consumer Product Safety Commission (CPSC), Quality Craft of Lilburn, Ga., is voluntarily recalling about 75,000 portable halogen outdoor work lights. Water could leak into the lights, presenting a serious shock hazard which could cause serious injury or a possible fatality. In addition, the internal wiring temperature may exceed limits that are safe, posing a fire hazard.

The yellow and black portable halogen work lights, measuring 12 inches high from the base to the top of the handle, have a black cord. A sticker on one side of the light casing is labeled, "UL Underwriters Laboratories E 127638." A warning label on the other side of the casing reads in part, "WARNING - LAMP IS HOT!!!" The lights are packaged in a white cardboard box with a photo of the lamp, labeled in part "500 WATT HALOGEN WORK LIGHT ... Powerful Outdoor Lighting ... Quality Craft ... QH-505 ..."

This recall affects only Quality Craft Halogen Work Lights with model number QH-505 and UL number E 12/638. No other Quality Craft products are involved in this recall.

Menards, Inc. home center and building supply stores throughout the upper midwest sold the lights from November 1994 through July 1995 for \$9.95.

Consumers should stop using these portable halogen work lights immediately and return them to the nearest Menards for a full refund or replacement light. For more information, consumers should call Quality Craft at (800) 200-2199.

Quality Craft is not aware of any injuries associated with these work lights. This recall is being conducted to prevent the possibility of injury.

Send the link for this page to a friend! The U.S. Consumer Product Safety Commission protects the public from unreasonable risks of injury or death from 15,000 types of consumer products under the agency's jurisdiction. To report a dangerous product or a product-related injury, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270, or visit CPSC's web site at [www.cpsc.gov/talk.html](http://www.cpsc.gov/talk.html). Consumers can obtain this release and recall information at CPSC's web site at [www.cpsc.gov](http://www.cpsc.gov).

Ser. No. 09/891,484  
Response to Office Action  
Exhibit C